

Customer No.: 31561
Application No.: 10/709,717
Docket No.: 13004-US-PA

AMENDMENTS

In the Claims

Claim 1. (Currently amended) A fluid ejection device suitable for an ink-jet printer, comprising:

a substrate, having an orifice;

a beam, disposed over the substrate, the beam having a fixed portion and a cantilever portion, wherein the cantilever portion is disposed over the orifice;

an activation pad, disposed between the cantilever portion of the beam and the substrate, wherein the activation pad ~~are~~ is disposed apart from the beam; and

a stopper, disposed on an end of the cantilever portion and protruded from the cantilever portion of the beam and aligned to the orifice of the substrate, wherein at least a portion of the stoppers fits into the orifice when the cantilever portion of the beam is pulled down.

Claim 2. (Cancelled)

Claim 3. (Previously amended) The fluid ejection device of claim 1, wherein a dimension of the stopper is larger than that of the orifice.

Claim 4. (Original) The fluid ejection device of claim 1, wherein the fixed portion of the beam is a collar structure disposed on the substrate for supporting the cantilever portion.

Claim 5. (Original) The fluid ejection device of claim 1, further comprising an encapsulation structure covering the substrate for encapsulating the beam and the activation pad.

Customer No.: 31561
Application No.: 10/709,717
Docket No.: 13004-US-PA

Claims 6 ~ 17 (Cancelled)

Claim 18. (Currently amended) A method of operating a fluid ejection device, comprising:

- providing the fluid ejection device of claim 1;
- providing a fluid;
- filling the fluid into the fluid ejection device;
- wherein when a voltage is applied to the activation pad resulting in a voltage difference occurring between the activation pad and the beam, the cantilever portion of the beam is pulled down from an initial position toward the orifice of the substrate resulting in the stopper sticking to the orifice for ejecting the fluid out of the orifice and at least a portion of the stopper fitting into the orifice; and

wherein when the voltage applied to the activation pad is removed, the cantilever portion of the beam gradually moves away from the orifice.

Claim 19. (Original) The method of operating a fluid ejection device of claim 18, wherein when the voltage applied to the activation pad is removed, the cantilever portion of the beam gradually moves away from the orifice.

Claim 20. (Cancelled)